

PM2.5 State Implementation Plans

2011 Progress Report and Proposed SIP Revisions

April 28, 2011

Today's Proposed Action

- Approve submittal of PM2.5 SIP revisions to U.S. EPA
 - Reasonable Further Progress calculations
 - Transportation Conformity Budgets
- Approve submittal of updated ARB PM2.5 rulemaking calendar
- Approve submittal of South Coast SIP revisions

Background

Overview of SIP Process

- U.S. EPA adopts air quality standard
 - Designates nonattainment areas
 - Establishes attainment deadlines
- States adopt and implement SIPs
- U.S. EPA reviews SIPs for federal approval
- U.S. EPA periodically reviews standard
 - Health studies inform need for revision
 - New SIP process begins if standard is revised

Key SIP Elements

- Attainment demonstration
- Emission inventory, modeling, air quality data
- Control strategy
- Other SIP elements
 - Reasonable Further Progress
 - Transportation Conformity Budgets
 - Rulemaking calendar

PM2.5 Attainment Demonstration

- Modeling used to set emission targets
 - South Coast base year 2002
 - San Joaquin Valley base year 2005
- Control strategy designed to meet emission targets in 2014
 - Adopted regulations
 - Enforceable commitments
- Based on best scientific and economic information available

PM2.5 Components

- Multiple PM2.5 precursors
- South Coast
 - PM2.5, NOx, SOx, and ROG
- San Joaquin
 - PM2.5, NOx, and SOx

Effectiveness of PM2.5 Precursor Reductions

- Modeling used to determine relative effectiveness of PM2.5 precursor reductions
- Ratios allow normalization to any single precursor
- Provides for an equivalent metric to track progress in emission reductions

ARB Approved PM2.5 SIPs in 2007/2008

- ARB SIP strategy adopted in 2007
 - In-use on-road commercial trucks
 - In-use construction and mining equipment
 - Clean-up of port-related emission sources
- South Coast SIP approved in 2007
- San Joaquin Valley SIP approved in 2008

Overview of U.S. EPA's Proposed Actions on PM2.5 SIPs

- Proposed partial approval/partial disapproval in November 2010
 - Proposed approval of control strategies and other elements
 - Partial disapproval due to magnitude of enforceable commitments
- Expected re-proposal in May 2011

PM2.5 SIP Implementation Status

Implementation of the PM2.5 SIPs Began in 2007

- ARB adopted regulations for:
 - Commercial trucks and buses
 - Off-road diesel construction equipment
 - Goods movement
 - Consumer products
 - Smog Check (Bureau of Automotive Repair)
- Districts adopted regulations consistent with SIP commitments

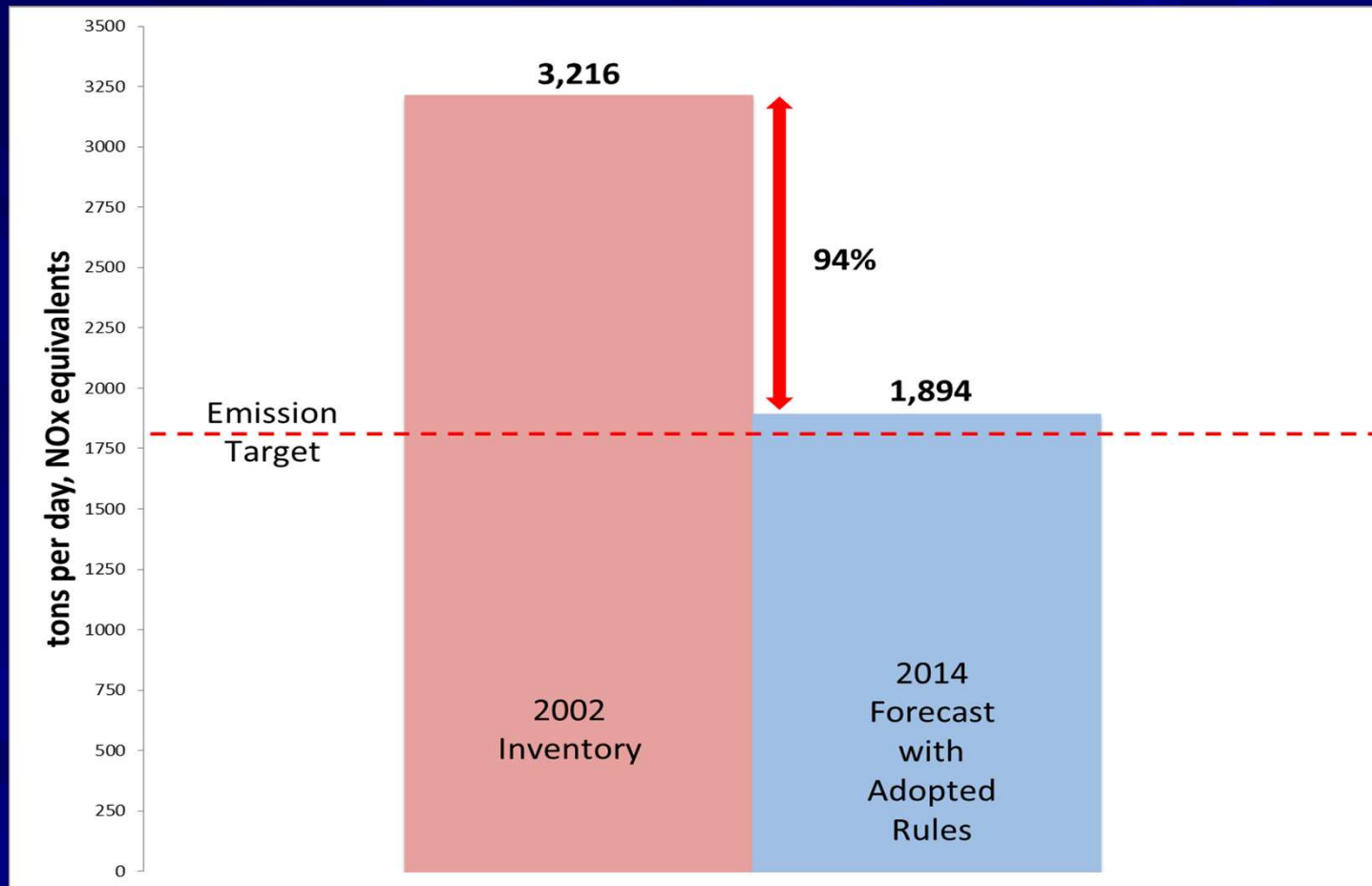
ARB Diesel Rules

- Key issue in U.S. EPA's November 2010 proposed action
 - SIPs relied on ARB commitment to adopt rules
 - Board acted to fulfill commitment in December 2010
- Rules will meet PM_{2.5} SIP needs in 2014
- Board action incorporated impacts of economic recession

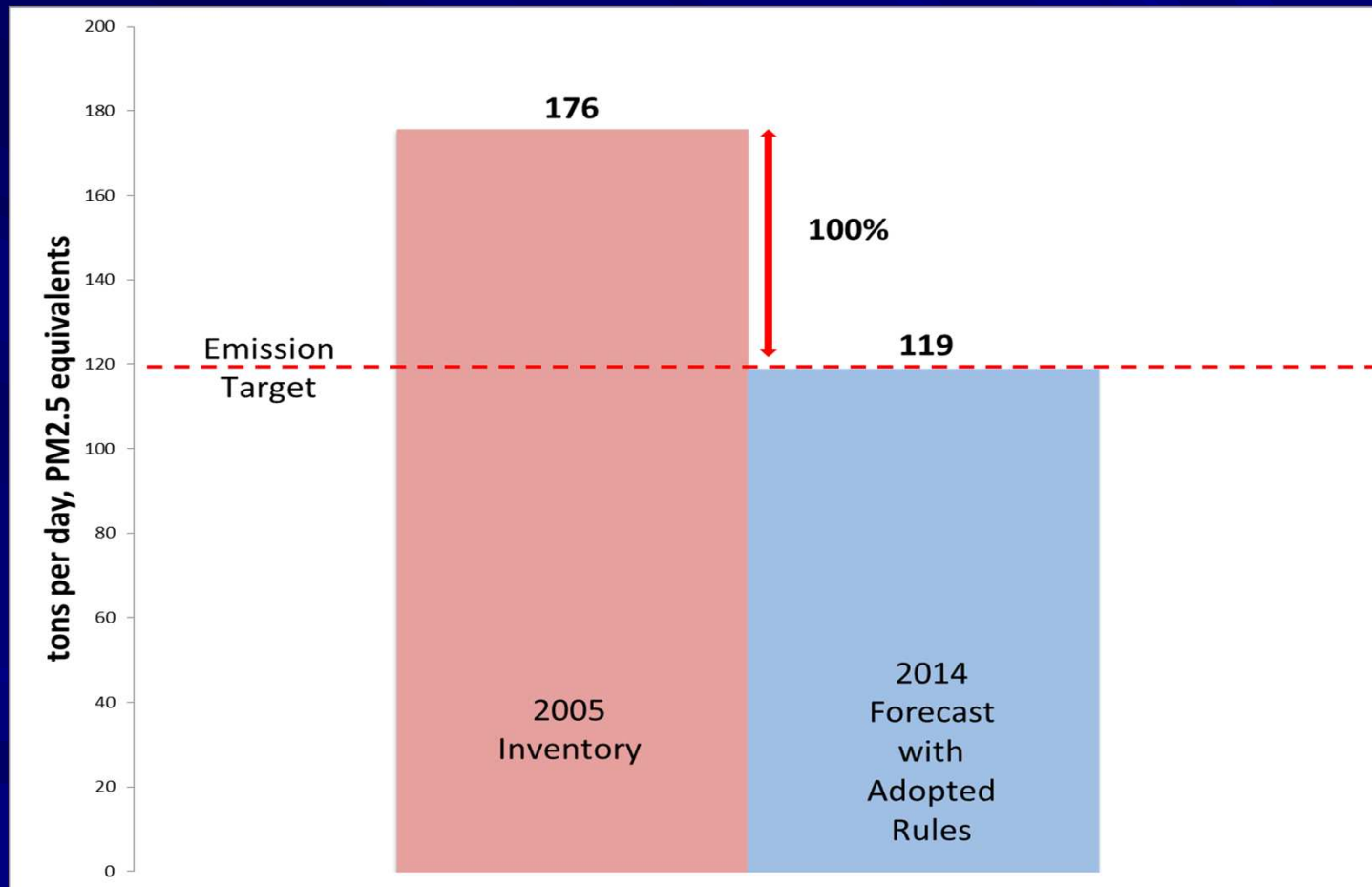
Accounting for the Recession in the PM2.5 SIPs

- Proposed revisions are consistent with economic forecast used in 2010 diesel regulations
- Modeled emission targets are still valid since SIP base year precedes recession
- Expected 2014 emissions are lower with “average” economic recovery scenario

Meeting the Emission Target South Coast Air Basin



Meeting the Emission Target San Joaquin Valley



Proposed PM_{2.5} SIP Revisions

Need for SIP Revisions

- Reflect recent Board actions on diesel rules
- Account for economic recession
- Provide for U.S. EPA approval of PM_{2.5} SIPs
- Submit South Coast revised SIP accounting

Proposed ARB SIP Revisions

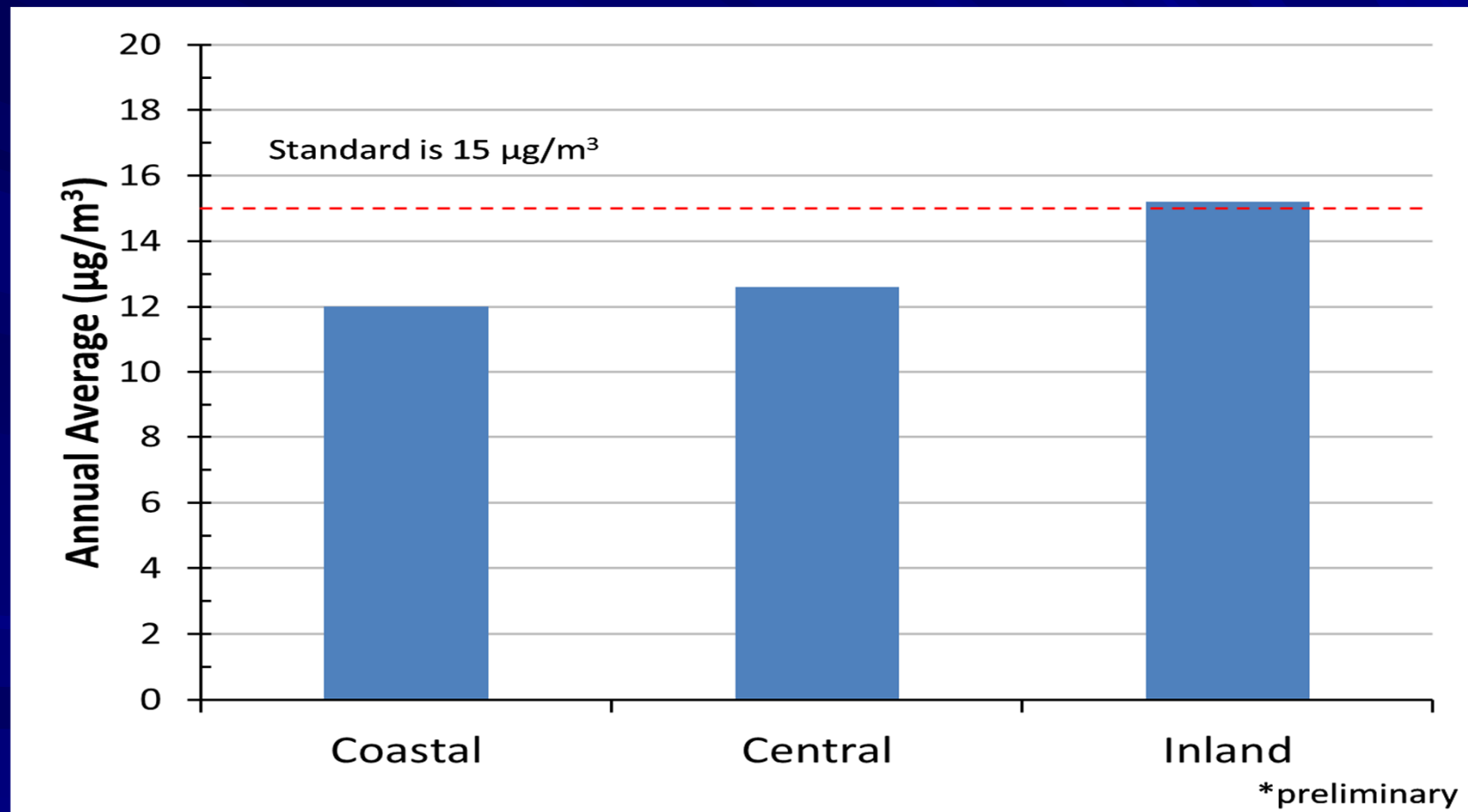
- Reasonable Further Progress calculations
- Transportation Conformity Budgets
- ARB rulemaking calendar update

Overview of South Coast SIP Revisions

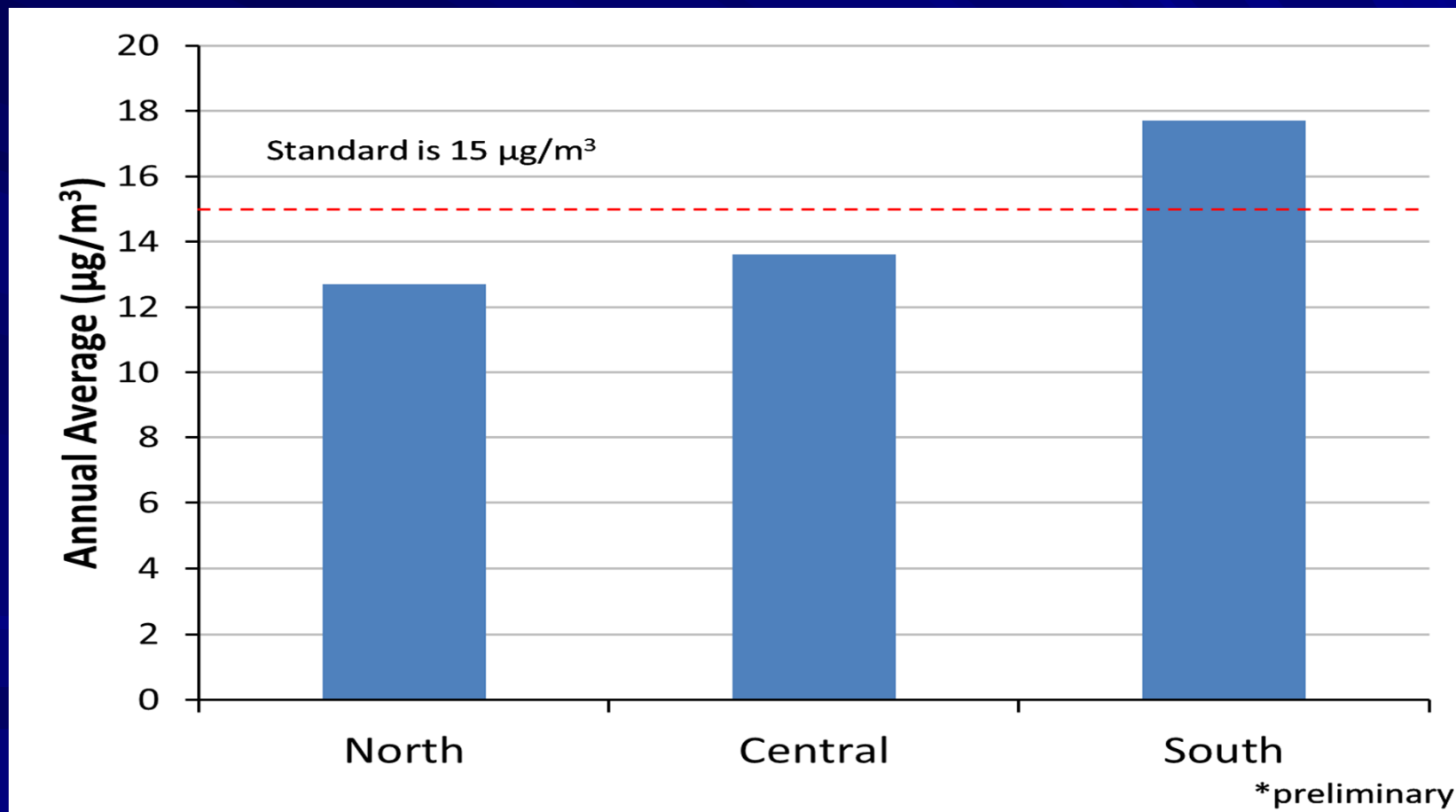
- The South Coast adopted revisions to 2007 PM_{2.5} and Ozone SIPs
 - Modified emission reduction commitment to reflect improved off-road 2014 emission estimates
 - Added commitment to partially backstop emission reductions for federal sources
- Staff proposes approval as a SIP revision

Current PM2.5 Air Quality

South Coast Air Basin PM_{2.5} Air Quality (2010)



San Joaquin Valley PM_{2.5} Air Quality (2010)



Moving Forward

On-going PM2.5 SIP Activities

- Continue implementation of SIPs for annual PM2.5 standard
- SIPs for 24-hour PM2.5 standard due in 2012
- Track U.S. EPA review of PM2.5 standards and assess implementation issues

On-going Ozone SIP Activities

- Staff to report to Board on federal ozone standard review in May 2011
- Board consideration of similar revisions to ozone SIPs for South Coast and San Joaquin Valley in June 2011
- Track U.S. EPA review of ozone standard and assess implementation issues

Recommended Board Action

- Approve submittal of PM2.5 SIP revisions to U.S. EPA
- Approve PM2.5 progress report